Resolving the Fine-Structure Constant Problem and Introducing Ramion Theory

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Introduction

We propose a theory about existence of the Ramion. We propose that the universe is made from only one elementary particle, the ramion (Rotational **A**nti-matter and **m**atter **I**on), and it is an absolute energy in form of three-dimensional sphere. In addition to energy, the ramion on its own, also defines: matter, space, time, antimatter, electromagnetic, strong nuclear force, weak nuclear force, dark matter, dark energy. The ramion also defines physical constants including the fine-structure constant and the four fundamental forces. The ramion links relativity, gravitation, and quantum theory, and demonstrates a unification of the fundamental forces. The ramion has two forces that are in mutual equilibrium:

(i) A pressure **P** that causes repulsion with respect to the other ramions, and,

(ii) A rotational force that generates an electric field.

(1) $e = \left(\frac{f_r}{2}\,\rho_r = P\right) V + \frac{1}{2}\, m\, c^2$

m: The mass equivalent to the ramion's total energy;

c: The speed of light equals the Ramion's rotational speed;

P: Pressure;

V: Volume;

$\boldsymbol{f_r}$: Degree of Freedom (Considering this point: three dimensions for location and three dimensions for speed, and reduction of two dimensions for the equipotential surfaces which results in 4), hence:

(2) $P = \frac{\rho_r}{2}$

ρ_r: Energy density within the Ramion's volume;

(3) $P = \frac{\rho_r}{2}$, e = PV + $\frac{1}{2}$ m C^2, e= m C^2

Geometric Structure of the Ramions:

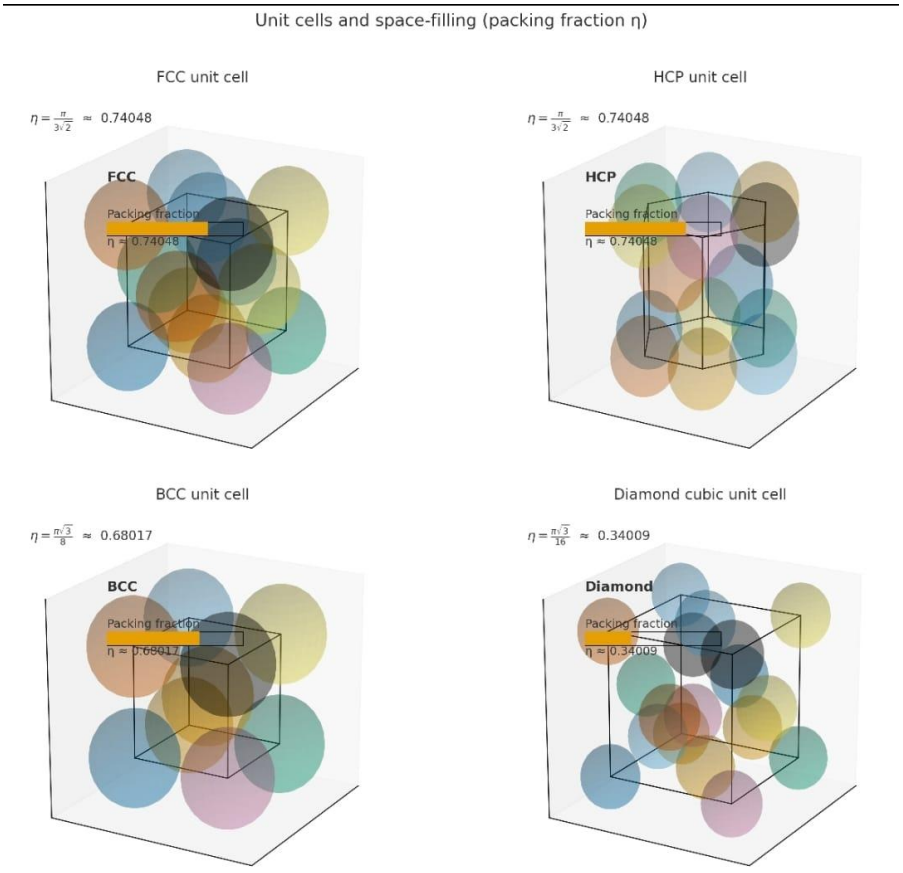
Because the ramions repel one another in all directions, they ultimately reach a state of maximal compression. Nevertheless, over certain intervals they cause spacetime to expand (dark energy's role).

Maximum compression means the space-occupancy factor, taking into account the following:

(4) $\varphi = \frac{\pi}{3\sqrt{2}} =$ 0.74048048969

Although both models (the FCC and HPC hexagonal) were considered, research by Ramioncs Ltd recommends the FCC model, which yields a softer space.

In the FCC model, each ramion has twelve nearest neighbours in the next layer, all tangent to it.



We compute the number of ramions in layer N as follows: $10n^2 + 2$. The cumulative number up to and including layer N is:

(5) N (n) = $\frac{10n^3+15n^2+11n}{3}$ + $(1\ for\ centre)$

For layers sufficiently distant from the assumed centre, we obtain:

(6) V = $\frac{4}{3}\ \pi\ R^3 = \frac{4}{3}\ \pi\ \left(\alpha'\ n\ (2\ r)\right)^3\ \frac{\pi}{3\sqrt{2}} = N\ (n) \frac{4}{3}\ \pi\ r^3 \rightarrow$

$\alpha' = \sqrt[3]{\frac{10}{24\ \varphi}} = \sqrt[3]{\frac{10\ \sqrt{2}}{8\pi}} = 0.855785095$ (radial compression ratio)

Whether we model this as a circle (πr^2) (or a hemisphere ($\frac{4\pi r^2}{2}$) when applying the cosine correction factor) we show that, in sufficiently distant layers, the ramions form an effective surface. The ratio of the area of that layer to the surface area of the corresponding sphere is β:

(7) $(10n^2 + 2)\pi r^2 = \beta\ 4\ \pi\ R^2 = \beta\ (4\pi)\ (\alpha'\ n\ 2\ R)^2 \rightarrow \beta = \frac{10}{16\alpha'^2} = \frac{10}{16\ (\frac{10\sqrt{2}}{8\pi})^{\frac{2}{3}}}$

$= 0.91698716849$

In what follows, we show that the parameters derived from the ramion's geometry resolve some unsolved problems in physics. Similar to the fine-structure constant, dark matter, and dark energy.

Implications for the Fine-Structure Constant

In what follows, the Ramion theory establishes the following for the fine-structure constant:

(8) $$\frac{1}{\propto} = \frac{40\pi}{\beta} \sqrt{1 - \frac{m_r}{m_\rho}} \quad \sqrt{1 - \frac{m_r}{m_e}}$$

Here m_r, m_e, m_p denote the mass or energy equivalents of romion, electron, and proton, respectively:

(9) $\frac{1}{\alpha} = 137.03976507112\ \ x \sqrt{1 - \frac{m_r}{m_e}}\ \ x \sqrt{1 - \frac{m_r}{m_p}}$

In view of the experimental value $\frac{1}{\alpha} = 137.036$, and assuming that the proton mass is much larger than the electron mass, the following result is obtained:

(10) $\frac{m_r}{m_e} = \frac{1}{18195} \rightarrow Ramion's\ Energy = 4.5\ x\ 10^{-18}$ J

If we assume:

(11) $mp = 1836\, me \ \rightarrow \ m_r = \frac{m_e}{18205}$

Gravity and Relativity within the Ramion theory

Mass is not created by concentration of energy. Dispersing a multi-layered energy network in neighbouring ramions creates mass.

Let empty space of V_1 denote the empty space of mass.

(iii) $\boldsymbol{\rho_r}$: Ramion volume energy density;
(iv) $\boldsymbol{\rho_s}$: Energy density of space;

(12) $\rho_r = \frac{\rho_s}{\varphi}$

Hence, like light, mass is also a wave and it is not an elementary particle.

A greater fraction of the released energy is allocated to the nearer the ramions.

Assuming sufficient distance from the centre of mass, we obtain the following (to reduce error, we approximate the Energy density as a continuous value):

(13) $\rho_r = \frac{(10\, n^2+2)\frac{4\pi}{3} r^3 \ \ (\rho_r = \frac{\rho_s}{\varphi})}{4\pi\ (R=\propto' n\ 2\ r)^2} = \rho_s\ (\frac{r}{r_s})^2$

r_s, t_s: $space\ steady\ state\ r, t$

(14) $r_{(R)} = r_s\sqrt{1 - \ f_{(R)}}$

(15) $\rho_{(R)} = \rho_{(s)} (1 - f_{(R)})$

For notational convenience in solving the differential equations, we define f.

(16) $\mathrm{F} = \frac{-\partial P}{\partial R} V_{m2} = \frac{1}{2} (V_{m2} = \frac{m_2 C^2}{\rho_s}) (\frac{-\partial P}{\partial R})$

(17) $\mathrm{F} = \frac{1}{2} m_s C^2 (\frac{-df}{dR}) \rightarrow g = \frac{c^2}{2} \left(\frac{-df}{dR}\right)$

(gravitational acceleration)

(18) $m_1 C^2 = E_{m1} = \int_0^\infty (\rho_s - \rho) \, 4 \pi R^2 \, d R \rightarrow \frac{m_1 C^2}{\rho_s} = 4\pi S \int f R^2 dR$

(energy balance equation)

(neglected in the relativity theory)

(19) $f \; and \; \left(\frac{-df}{dR}\right)$

Must be monotonically decreasing functions that tend to zero as r→∞,

(20) $\int_0^\infty \rho \; R^2 \, d R$

Or

(21) $\int_0^\infty f \; R^2 \, d R$

Must be finite and positive, so that energy of m_1 can be balanced.

The general solution can be found in the following functions:

(22) $$f = \sum f_k = \sum (\frac{R_F}{R})^k \exp(-(\frac{R}{R_D})^P)$$

(23) Gravitational Acceleration:

$$g = \sum g_k = \sum \frac{C^2}{2} \left(\frac{-df_k}{d_R}\right) = \frac{C^2}{2} \sum \frac{f_k}{R} \left\{k + p\,(\frac{R}{R_D})\right\} \exp\left(-(\frac{R}{R_D})^P\right)$$

(24) Energy Balance:

$$E = \sum E_k = \sum \rho_s \; 4\,\pi\, R_F^k \; R_D^{3-k} \left(\frac{1}{P} \; \Gamma(\frac{3-k}{P})\right)$$

(25) $$\Gamma(n) = (n-1)!$$

Within the Ramion theory, we define energy density of vacuum (or "so called" dark energy) as Energy density of space.

If we assume:

(26) $$\rho_s = 5.4 + 10^{-10} \; {}^{J}/_{m^3}$$

Then:

(27) $$R_D = 9.46\; x\; 10^{25} m = 10^{10}\; LY$$

However, if R_D is taken to be 10^6 times smaller (i.e. 10,000 light-year), then we must take ρ_s =10^{12}; hence:

(28) $\rho_s = 540\ {}^{J}/_{m^3}$

However, excessively large estimates of this energy density are incorrect.

Only k=1 and k=2 have all necessary conditions:

(29) (1≤K<3, P>0)

Therefore:

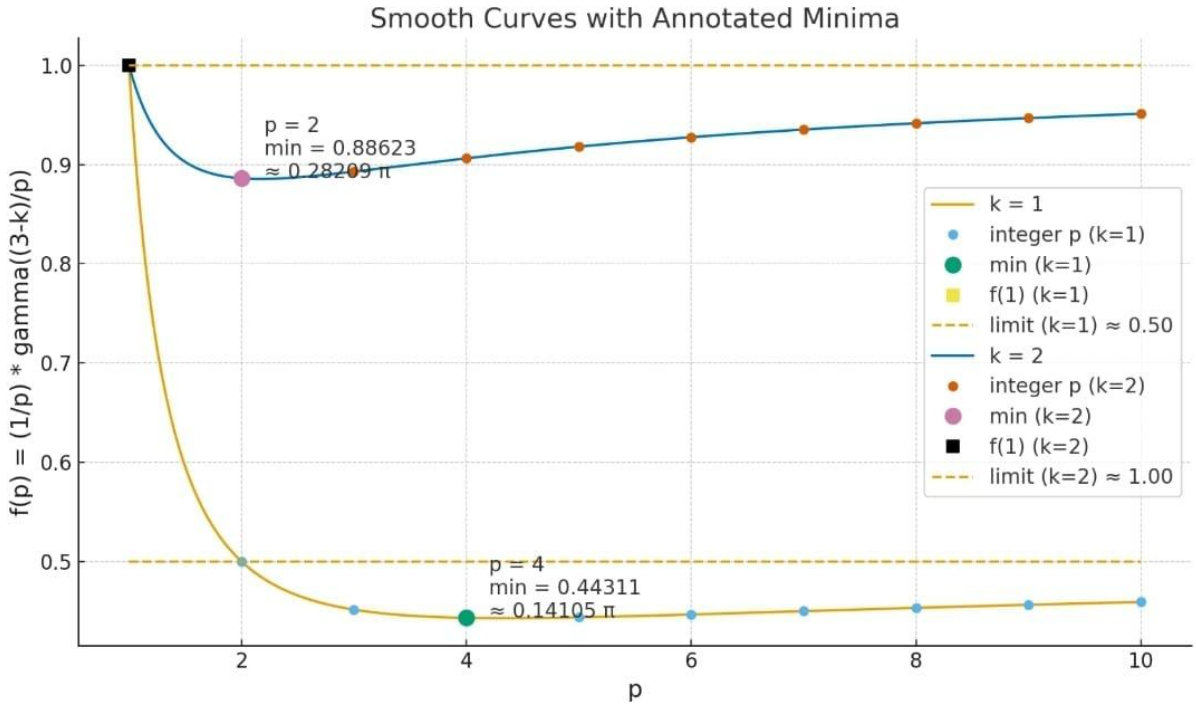
(30) $$\rho_s = \left(1 - \frac{R_F}{R}\, e^{-\left(\frac{R}{R_D}\right)^{P_1}} - \left(\frac{B}{R}\right)^2\, e^{-\left(\frac{R}{A}\right)^{P_2}}\right)$$

(31) $$g = \frac{C^2}{2}\left\{\frac{R_F}{R^2}\left(1 + P_1\left(\frac{R}{R_D}\right)^{P1}\right)e^{-(\frac{R}{R_D})^{P_1}} + \frac{B^2}{R^3}\left(2 + P_2\left(\frac{R}{A}\right)^{P2} - e^{-(\frac{R}{A})^{P_2}}\right\}\right.$$

(32) $$E = \rho_s\, x\, (4\pi)\left\{R_F^1\, R_D^2 \int_0^\infty \pi\, e^{-P_1}\, dx + B^2\, A^1 \int_0^\infty x^0\, e^{-P_2} dx\right\}$$

(33) $$E = 4\pi\rho_s\ \{\ R_F^1\ R_D^2\, Z_1\,(P_1) + B^2 A\ Z_2(P_2)\}$$

(34) $$Z_k(P) = \frac{1}{P}\,\Gamma(\frac{3-k}{P})$$



The gravitational formula in the ramions theory—which in fact arises from Ramion repulsion—consists of the following two parts: Part K=1 for long distances (as with ordinary gravity and also the effect of dark matter), and Part k=2 for short distances, analogous to the strong nuclear force. For greater accuracy, at short distances one should use a discrete analysis of the Ramions:

(35) $$R_F = \frac{2GM}{C^2}$$

Hence, mass is a distribution of energy, has no singularities, leaving behind a hole.

This formula applies equally to black holes and to small particles.

To balance the behaviour of gravitation and the mass distribution at distance R_1: We tune A and B.

To balance energy distribution:

(36) $mc^2 = \rho_s \, 4\pi \, R_f \, R_D^2$

(37) $\frac{C^4}{8\pi \, G \, \rho_s} = R_D^2$

This equation shows the relation between ρ_s (the energy density of space, i.e. dark energy) and R_D (the onset of the matter effect—for example, dark matter).

(38) K=1, T=1

(39) $g = \frac{C^2}{2}\left(\frac{R_F}{R^2}\left(1 + \frac{R}{R_D}\right)\right) \; e^{-\frac{R}{R_D}}$

(40) $g = \frac{C^2}{2}\left(\frac{\frac{2\,GM}{C^2}}{R^2}\,(1 + \frac{R}{R_D})\right) \; e^{-\frac{R}{R_D}}$

(41) $\rightarrow g = \frac{GM}{R}\left(\frac{1}{R} + \frac{1}{R_D})\right) \; e^{-\frac{R}{R_D}}$

Correction to the dark matter: the gravitational formula shows that at distances on the order of R_D:

(42) $g = \frac{GM}{e \,.\, R_D \,.\, R}$

That is, the orbital velocity of stars in the galaxy is linear

Time dilation

In the network of the ramions (which they are in state of rest), all forces and pressure to each ramion and each cell and each layer, natiuralised. But with ditrubution of energy (mass), there is no other way to keep structure of FCC and also natureilse forces at the same time, except: that time dilates according to the following ratio:

(43) $\sqrt{1-f}$

(44) $t' = t_s\sqrt{1-f}$

(45) $t_r = t_s\sqrt{1-\frac{2GM}{RC^2}}$

(46) $2\pi r_r = (2\pi r_s)\sqrt{1-\frac{2GM}{RC^2}}$

$(t_s, r_s \ \ at\ far\ steady\ state\ space)$

However, the speed and the energy are observer-independent. When a mass "moves", the ramions effectively move in the opposite direction. More precisely, the ramions need not move at all. In effect, they transfer their characteristics at speed of light to the adjacent ramion.

If a mass moves at speed **v**, we obtain the following relation:

(47) $t_r = t_s\sqrt{1-(\frac{v^2}{c^2} = \frac{R_F}{R})}$

There is no distinction between these two terms, just as a body must $m2$ attain the speed V (escape velocity) to escape gravity of $m1$.

Consider the following two integrals as further examples for reconciling Ramion theory and relativity:

If an object moves with speed x along a straight line, every point in space (at distance R from it) senses it $v\,\Delta t$ behind, therefore:

(48) $\Delta t = \frac{R}{C}$

And:

(49) $Throughout\ space$: $E = \rho_s \int \frac{R_F}{R' = \sqrt{\left(x\frac{V}{C}R\right)^2 + y^2 + z^2}} \; e^{-\frac{R'}{R_D}}$

(50) $E = \frac{\rho_S\, 4\,\pi\, R_F R_D^2}{1-(\frac{V}{C})^2} = \frac{\rho_S\, 4\,\pi \frac{2\,GM}{C^2} R_D^2}{1-\frac{V^2}{C^2}} = \frac{MC^2}{1-\frac{V^2}{C^2}}$

If an object with m mass moves (rotates) on a circle of radius r with speed ω:

(51) $R' = \sqrt{\left(x - r\,\cos\left(-\frac{\omega}{c}\,R\right)\right)^2 + \left(y - r\,\sin\left(-\frac{\omega}{c}\,R\right)\right)^2 + Z^2}$

(52) $\mathrm{E} = \rho_s \int \frac{R_F}{R'}\; e^{-\frac{R'}{R_D}} = \rho_s\, R_F\, \pi\, R_D^2 = MC^2$

That is, although its speed is $v = r\omega$, its energy does not exceed MC^2.

That is, in Raminocs theory, based on the path we simply and accurately compute the energy attributed to the object.

Electromagnetism in the Ramion theory:

Each Ramion has a rotation, such that the m-equivalent of its energy rotates at the speed c:

(53) $$e = mc^2 = \left(PV = \frac{1}{2}\, mc^2\right) + \left(\frac{1}{2}\, mc^2\right)$$

- Pressure part: $\left(PV = \frac{1}{2}\, mc^2\right)$
- Rotation part: $\left(\frac{1}{2}\, mc^2\right)$

The torque vector is positive at one pole and negative at the other; therefore each ramion has an equal amount of positive and negative electrical charge.

When a particle forms (i.e., a cavity or black hole devoid of ramion), then around that cavity, in a persistent manner, twelve swollen ramion are situated.[1]

These twelve Ramions are located around the cavity and must satisfy torque equilibrium. Therefore, they form pairs—two by two—that produce similar charge.

- As a result, we have six pairs with positive and negative charge.
- Among these six pairs, if all have the same sign, we have charge -e or +p.
- Thus, each Ramion has the electric charge as follows: $\pm\frac{e}{12}$
- If one pair is opposite to the others, then the net charge is: $\pm\frac{8}{12} = \pm\frac{2}{3}e$
- And if two pairs are opposite to the other four pairs, the net charge will be as follows:

[1] **It is worth noting that the dynamics of this matter are also examined within Ramion theory, and there is scope for further study.**

(54) $\pm\frac{4}{12}\,e = \pm\frac{1}{3}\,e$

This simple explanation shows why the only possible charges of an particle can only be the following numbers: $\pm 1\ or\ \pm\frac{2}{3}\ or\ \pm\frac{1}{3}$

Therefore, each charged particle requires energy to create these charges (electrical charges), and this energy (st=structure) is released into space as negative energy (according to the same relations discussed in the gravity section).

If we assume that bringing a ramion hemisphere[2] with charge q from infinity to the radius R of another ramion hemisphere with charge q, requires the integral of the following force:

(55) $\frac{Kq^2r}{R^2}$,

then we will have:

(56) $E_1 = \frac{Kq^2r}{R}$

Energy needed to bring n ramions:

(57) $E_{st} = \sum_{t=2}^{n}(t-1)\ \frac{K\,(Q/n)^2}{R}$

It should be noted that, in this part of the equation: $(t-1)$, the number 1 indicates that the first particle requires no energy.

(58) $E_{st} = \frac{K}{R}\left(\frac{Q}{n}\right)^2\ \frac{n\,(n-1)}{n^2} = \frac{K\,Q^2}{R}\ (1-\frac{1}{n})$

[2] **[or hemisphere created from ramion?]**

This coefficient: $\left(1-\frac{1}{n}\right)$, indicates the reduction in the required energy in the discrete, quantum case compared with assuming a continuous electric charge, and it is very important.

Supplying (distributing) the structural electric potential energy ρ_{st} energy-supply parameter:

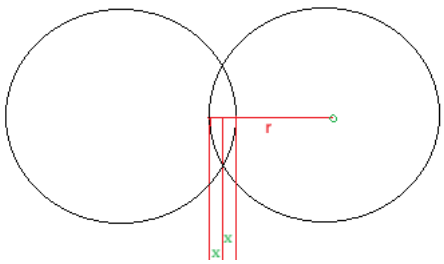
(59) $$\frac{K\,Q^2}{R}\left(1-\frac{1}{n}\right)=\int_{\infty}^{R_{st}}\left(\rho_{st}=\frac{K\,Q^2}{4\pi\,r^2}\right)dr\;\rightarrow\;\rho_{st}=\left(\frac{R}{4\,\pi\left(1-\frac{1}{n}\right)}\right)$$

The EST must be supplied by the surrounding ramions— but how?

If, as a negative-mass energy, we want to reduce the radius of the ramions, then either we have a spacetime discontinuity, or a density beyond tolerance.

Consequently, the only way to supply this energy is a slight indentation of the ramions into one another.

This repulsive force, in combination with the strong nuclear force, produces the weak nuclear force.



$V_c = V_{Common}$ (On one side) $= 2\,V_{cap}$ (On both sides)

(60) $$\frac{V_c}{r}=\frac{3}{4}\left\{\left(\frac{x}{r}\right)^2-\frac{1}{3}\left(\frac{x}{r}\right)^3\right\}$$

The energy released in this bond, relative to ρ_s, is in the same ratio as $\frac{V_c}{V}$. Exactly analogous to the gravitational equivalent—and disregarding dark matter effect (which is not observable at short distances).

We say that ρ_{st} is distributed in proportion to $\frac{1}{R_2}$.

(61) $$\left(\frac{x}{r}\right)^2 = \frac{R_{st}}{R},$$

These caps reduce the ramion's torque (if they are not oriented in the same direction):

(62) $$I = \frac{1}{5} mr^2$$

Spherical inertia with a volumetric distribution:

(63) $$I = \frac{r^2}{5}\left(\Delta m = \frac{\rho_r}{c^2}\left(\Delta v = V\ \frac{3}{4}\left(\frac{x}{r}\right)^2\right)\right) \rightarrow$$

$$I = \frac{3}{20}\ \frac{e}{c^2}\ \left(\frac{R_{st}}{R}\right) r^2$$

e: Ramion's energy

How is the electric field propagated in space—that is, in the Ramions?

As long as no other charged particle is present, the Ramions, by sharing the volume V_c, supply the electric potential energy Q_1; and since they become aligned, they perceive the same volume, pressure, and even the previous torque. Ramion theory makes possible the propagation of the static electric field, which is not possible with Photon, because photons can explain electromagnetic wave, not static electrical field.

Now suppose the charge Q_2 is placed in this field. The twelve Ramions of the charge Q_2 cannot rotate freely along this path and align their torques; consequently, energy is required at the angle θ:

(64) $$e_2 = \frac{1}{2}\left(\frac{3}{20}\,\frac{e}{c^2}\left(\frac{R_{st1}}{R}\right)r^2\right)w^2\cos\theta$$

(65) $$rw = c$$

(66) $$e_2 = \frac{3}{40}\,e\left(\frac{R_{st1}}{R}\right)\cos\theta$$

(67) Force: $f_2 = \frac{-dE}{dR} = \frac{3}{40}\,e\,\frac{R_{st1}}{R^2}\cos\theta$

(68) Pressure: $P_2 = f_2\,\frac{\beta}{\pi r^2}$, $\beta = \frac{10}{16\left(\frac{10\sqrt{2}}{8\pi}\right)^{2/3}}$

(From geometry)

(69) $$F_2 = \int P_2 = \frac{3}{40}\;e\;R_{st1}\;\frac{\beta}{\pi r^2}\;\left\{\frac{2\,V_2}{R^3}\right\}$$

Surface

We multiply the numerator and denominator by 4r:

(70) $$F2 = \frac{6}{40}\,\frac{4r\,e\,\beta}{4r\,\pi\,r^2=3v_r}\;\frac{2\,V_2}{R^3}\,\mathrm{x}\,R_{st1}$$

(71) $$\hbar c = \left(\frac{e}{w}\right)(rw) = er$$

(72) $$F_2 = \frac{16\beta}{40}\hbar c\;\left(\frac{R_{st1}}{R^3}\right)$$

Since gravity is much weaker than electromagnetism: $v_2 \cong v_r$

We assume $q_2 > q$

R is the distance at which the induced electric surface charge densities from side Q_1 and side Q_2 are equal. At this distance, we calculate the force:

(73) $\frac{Q_2}{R_2} = \frac{Q_1}{R}$

(74) $F_2 = \frac{16\beta}{40}(\hbar c) \quad \frac{R_{st1}}{R^3 = R^2 \ (R = \frac{Q_1 R_2}{Q_2})}$

(75) $F_2 = \frac{16\beta}{40}(\hbar c) \quad \left(\frac{Q_2\, R_{st1}}{Q_1\, R_2}\right) \quad \frac{1}{R^2}$

To avoid being restricted to the condition $\langle {Q_2 \ll Q_1 \atop R_2 \ll R_1} \rangle$, and to make the forces F_1 *and* F_2 equal, we compute the geometric mean of F_1 *and* F_2:

(76) $F = \sqrt{F_1\, F_2} = \frac{1}{R^2}\ \frac{16\beta}{40}\ \hbar c \quad \sqrt{\frac{R_{st1}}{R_1}\ x\ \frac{R_{st2}}{R_2}}$

$$\rightarrow F.R^2 = \hbar c\ \frac{\beta}{40\,\pi}\ X\ \frac{1}{\sqrt{1-\frac{m_1}{m_r}}}\ x\ \frac{1}{\sqrt{1-\frac{m_2}{m_r}}}$$

Hence, electromagnetic ore gets slight effect of electrical change mass.

The fine-structure constant is, in fact, related to P and e, and has increased by 27.48 per million.

That is, its reciprocal has decreased somewhat from $\frac{40\,\pi}{\beta}$

(77) $137.035999206 = 137.03976507112\sqrt{1-\frac{m_r}{m_e}} \rightarrow m_r = \frac{1}{18197}\, m_e$

(78) Noting: $m_p = 1836\, m_e$ $137.035999206 = 137.03976507112\sqrt{1-\frac{m_r}{m_e}}\sqrt{1-\frac{m_r}{m_p}} \rightarrow m_r = \frac{1}{18205}\, m_e$

Based on an examination of the masses of elementary particles, it appears that the S quark and the Z boson were produced without the creation of other heavy particles.
According to the N(n) relation, the required number of Ramion layers for these two particles is 99 and 986 layers, respectively.

We believe that these equations state the following: if the electric force is computed using Coulomb's law $k\ \frac{q_1 q\ ^2}{R^2}$, or with the value 137.035999206 for $\frac{1}{\alpha}$ (without mass correction), then the calculation is valid only for a proton and an electron or nuclear radius. For proton–proton it must be reduced by 27.84 per million, and for electron–electron it must be increased by 27.48 per million.

That is, for these quarks, in the mass-correction formula, the effective mass is $\frac{1}{3}$ or $\frac{2}{3}$.

Explanation of matter–antimatter Asymmetry

Our Universe is similar to a Ramion—perhaps a ramion nested within its mother cosmos, with the possibility of an unbounded mother–daughter hierarchy, or even a recursion in which the whole curls back into its own core. In any case, the only plausible rationale for the breaking of matter–antimatter symmetry is that our Universe is currently performing the rotation.

If, in our surroundings (i.e., within the hemisphere of the Universe we inhabit), the rotation is such that a slight negative charge resides in the internal vacuum of space, then this small excess (together with electric-charge conservation) drives the heavier particles to become + and the lighter particles to become −.

Thus, in the other hemisphere of our universe, antimatter may perhaps dominate.

Therefore, if cosmological observations in our vicinity allow us to determine the prevailing direction of rotation, that direction—reflected within the ramion—can likewise indicate whether a clockwise produces of a ramion corresponds to positive or to negative charge.

Photon is not merely an electromagnetic wave; macroscopic bodies may likewise be regarded as hypothetical quanta. Accordingly, both material quanta and photon are, in essence, waves rather than particles. Under certain observational conditions, however, they may be perceived and registered as particles.

A single Ramion cannot act as a photon on its own, because it would have to change either its rotational speed or its direction of rotation, and it has no force to accomplish either.

Consequently, the electric field generated by the rotation of the Ramion—and, on larger scales, as described by the Maxwell;s equations—by its own rotation gives rise to a magnetic field. However, since this energy transfer ultimately proceeds in the form of Ramion quanta, it can be regarded as a quantum of energy, termed photon. The energy of this photon is similar to the hypothetical Coriolis force:

(79) $F = m(c)\ X\ w$

(80) $E = m\ (rv)\ X\ w = mrc\ w =$

$$\hbar = mrc \quad [reduced\ Planck\ constant\ ] \rightarrow E = \hbar\, w \quad [For\ photon]$$

$$[For\ real\ Ramion]\ \hbar\, c = mrc^2 = m\ c^2\ r = er$$

Elementary particles in Ramion theory

The only elementary particle is the ramion; other particles are either outright misinterpretations (such as dark matter, the graviton, the gluon).

Energy computed for ramion: $\frac{m_e}{18205}$

Which shows that the S quark has arisen from the complete collapse of 99 FCC layers, and that the Z boson has formed solely from the collapse of 986 ramion layers.

Likewise, 96 U quarks, 72 D quarks, and 80 electrons—equivalent to 40 protons, 80 electrons, and 16 neutronwith 48 possitive particles—have formed from the collapse of 186 ramion layers.

The secret of layer 99,186,986,000 is that, after layers 2, 3, and 5—which produce very light particles—these layer are the only layer whose radius simultaneously halves both the surface area and the cross-sectional area of the ramions; and more layers are not that strong because of geometry.

The lightest particles are formed from only a single (12+1) ramion layer.

In the ramion, not only the fine-structure constant but also the reason for the electric charges $\pm 1, \pm\frac{2}{3}, and\ 1\frac{1}{3}$, the matter–antimatter asymmetry, and the specific masses of the elementary particles are readily calculable.

With the Ramion theory, the dynamics of ramion (elementary-particle) reactions can likewise be modelled with the highest conceivable precision.

Cosmology in Ramion theory

In Ramonics theory, bridges have been built not only between gravitation and electromagnetism (the so-called four fundamental forces) and between relativity and the quantum, without singularities for everything from the smallest particles to the largest black holes.

For example, the followings, relate dark matter and the energy density of space (e.g., dark energy):

(81) $$(electrical)\ FR^2 = \frac{\beta}{40\,\pi}\ \hbar c\ \frac{1}{\sqrt{1-\frac{m_r}{m_1}}}\quad\frac{1}{\sqrt{1-\frac{m_r}{m_2}}}$$

$$= \quad K\ Q_1\ Q_2\ \frac{1}{\sqrt{1-\frac{m_r}{m_1}}}\quad X\ \frac{1}{\sqrt{1-\frac{m_r}{m_2}}}$$

(82) (Gravity) $$F = \frac{2\,GM}{C^2R}\ \left(\frac{1}{R}+\frac{1}{R_D}\right)\ e^{-\frac{R}{R_D}}$$

(For k=1, p=1)

(83) $$R_D^2 = \frac{C^4}{8\ \pi\ G\ \rho_s}$$

(84) $$F_s\ (strong\ Nuclear) = \frac{B^2}{R^3}\ (2+P_2)\ e^{-(\frac{R}{A})^{P^2}}$$

(for K=2)

This theory models matter, dark matter, and waves by altering the arrangement of Ramions, and therefore only the energy of space must be taken into account in calculations of the age and dimensions of the Universe.

Studies based on this theory open many avenues concerning the expansion of the Universe, the Big Bang, and cosmology, in addition to relativity, quantum theory, and elementary particles.

Ramin theory and philosophy

On the one hand, ramions remove the finger of God from the fine-structure constant and fine tuning, and place the burden upon geometry!

On the other hand, they indicate that our entire Universe could be a ramion within a more transcendent universe; conversely, our Universe may be the mother or daughter of other universes. Perhaps this chain is infinite, or

perhaps it returns to itself—our Universe may be, for example, the mother of its own mother's mother.